



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,714	10/30/2001	Kenneth H. Potter	112025-0465	2291

24267 7590 04/27/2006

CESARI AND MCKENNA, LLP
88 BLACK FALCON AVENUE
BOSTON, MA 02210

EXAMINER

JAIN, RAJ K

ART UNIT	PAPER NUMBER
----------	--------------

2616

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,714

Applicant(s)

POTTER ET AL.

Examiner

Raj K. Jain

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27, 29 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27, 29, 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

General Remarks

Examiner acknowledges cancellation of claim 28 and addition of new claim 30.
Examiner acknowledges correction of claims 1, 11 and 24 and withdraws 35 USC 101 rejections accordingly.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-27, 29 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Buchholz et al (US005440545A).

Regarding claim 1, Buchholz discloses a method for reassembling a packet (see abstract, Figs. 2, and 8 col 8 lines 37- col 9 line 8, packet reassembly is performed based on the reassembly header information in Fig. 6 directing where in data memory 234 each fragment 312 in Fig. 3 will be stored. A reassembly ID 802 is used in conjunction with reassembly registers 810 in storing and properly reassembling the packets originating from one or more devices) the method comprising of:

-locating a fragment packet descriptor associated with the packet (see Figs. 4 & 5, col 6 lines 16-39, a fragment packet 440 as transmitted contains the packet header 420 information within which (detailed in Fig. 5) contains the virtual circuit ID contained

Art Unit: 2616

in packet switch 140 of Fig. 2. The virtual circuit ID addresses a queue control block which in turn points to packet descriptors, thus a fragment packet descriptor associated with a packet is located using virtual circuit ID pointers); and

- placing the contents of the fragment packet descriptor in a packet descriptor associated with the packet (again see Figs. 4 & 5, col 6 lines 16-39, a fragment packet 440 as transmitted contains the packet header 420 information within which (detailed in Fig. 5) contains the virtual circuit ID contained in packet switch 140 of Fig. 2. The virtual circuit ID addresses a queue control block which in turn points to packet descriptors, thus a fragment packet descriptor associated with a packet is located using virtual circuit ID pointers, furthermore, the contents 510 therefore of a specific packet descriptor are associated with a specific packet fragment 440 as transmission packet).

Regarding claim 7, Buchholz discloses a system for reassembling a packet.

The system by nature includes a method for performing a specific task of reassembling packets and sending acknowledgement notices within a specific apparatus (in this case the switch) that performs the desired task at hand (see abstract, Figs. 2 & 8, col 8 lines 37- col 9 line 8, packet reassembly is performed based on the reassembly header information in Fig. 6 directing where in data memory 234 each fragment 312 in Fig. 3 will be stored. A reassembly ID 802 is used in conjunction with reassembly registers 810 in storing and properly reassembling the packets originating from one or more devices) the system comprising of:

- means for locating a fragment packet descriptor associated with the packet (see Figs. 4 & 5, col 6 lines 16-39, a fragment packet 440 as transmitted contains the packet header 420 information within which (detailed in Fig. 5) contains the virtual circuit ID contained in packet switch 140 of Fig. 2. The task is performed via the virtual circuit ID addresses a queue control block which in turn points to packet descriptors, thus a fragment packet descriptor associated with a packet is located using virtual circuit ID pointers); and

- means for placing the contents of the fragment packet descriptor in a packet descriptor associated with the packet (again see Figs. 4 & 5, col 6 lines 16-39, a fragment packet 440 as transmitted contains the packet header 420 information within which (detailed in Fig. 5) contains the virtual circuit ID contained in packet switch 140 of Fig. 2. The task is performed via the virtual circuit ID addresses a queue control block which in turn points to packet descriptors, thus a fragment packet descriptor associated with a packet is located using virtual circuit ID pointers, furthermore, the contents 510 therefore of a specific packet descriptor are associated with a specific packet fragment 440 as transmission packet).

Regarding claims 11 and 17, Buchholz discloses a system for reassembling a packet. The system by nature includes a method for performing a specific task of reassembling packets and sending acknowledgement notices within a specific apparatus (in this case the switch) that performs the desired task at hand (see abstract, Figs. 2 & 8, col 8 lines 37- col 9 line 8, packet reassembly is performed based on the reassembly header information in Fig. 6 directing where in data memory 234 each

Art Unit: 2616

fragment 312 in Fig. 3 will be stored. A reassembly ID 802 is used in conjunction with reassembly registers 810 in storing and properly reassembling the packets originating from one or more devices) the system comprising of:

- a method and means for receiving a plurality of fragments associated with the packet (see Figs. 2-5, col 1 lines 36-53, col 5 lines 53- 67, col 9 lines 25-37, a plurality of fragmented packets are received at the receiving device with header information and control information);

- a method and means for determining if all the fragments for the packet have been received (see Figs. 2-5, col 1 lines 36-53, col 5 lines 53- 67, col 9 lines 25-37, a plurality of fragmented packets are received at the receiving device with header information and control information, an ACK or acknowledgement signal is sent back to the source device identifying which fragment if any of the data packet have been received or not.); and

- a method and means for issuing a request to a reassembly assist function if all the fragments for the packet have been received (see Fig. 10, col 11 lines 34-40, col 13 lines 62-67 a request is issued for retransmission only if a fragment of a data packet is lost or corrupted, otherwise a request is issued or an ACK is sent to the reassembly module 214 of Fig. 2 as each fragment is received at the receiving source. A packet complete 1140 is issued when all fragments of a fragmented data packet are received.).

Regarding claim 21, Buchholz discloses a system for reassembling a packet.

The system by nature includes a method for performing a specific task of reassembling

Art Unit: 2616

packets and sending acknowledgement notices within a specific apparatus (in this case the switch) that performs the desired task at hand (see abstract, Figs. 2 & 8, col 8 lines 37- col 9 line 8, packet reassembly is performed based on the reassembly header information in Fig. 6 directing where in data memory 234 each fragment 312 in Fig. 3 will be stored. A reassembly ID 802 is used in conjunction with reassembly registers 810 in storing and properly reassembling the packets originating from one or more devices) the system comprising of:

- a processor (see 110 of Fig. 1b, col 3 lines 40-47.)
- reassembly assist configured to communicate with the processor (see 214 of Fig. 2 which is a detailed view of packet switch 140 of Fig. 1);
- a processor for receiving a plurality of fragments associated with the packet (see Figs. 2-5, col 1 lines 36-53, col 5 lines 53- 67, col 9 lines 25-37, a plurality of fragmented packets are received at the receiving device with header information and control information);
- determining if all the fragments for the packet have been received (see Figs. 2-5, col 1 lines 36-53, col 5 lines 53- 67, col 9 lines 25-37, a plurality of fragmented packets are received at the receiving device with header information and control information, an ACK or acknowledgement signal is sent back to the source device identifying which fragment if any of the data packet have been received or not.); and
- issuing a request to a reassembly assist function to reassemble the packet have been received (see abstract, Figs. 2 & 8, col 8 lines 37- col 9 line 8, packet reassembly is performed based on the reassembly header information in Fig. 6 directing

where in data memory 234 each fragment 312 in Fig. 3 will be stored. A reassembly ID 802 is used in conjunction with reassembly registers 810 in storing and properly reassembling the packets originating from one or more devices).

Regarding claims 22, 24, 26, 29 and 30, Buchholz discloses a method and apparatus and system (see col 1 lines 10-14) for reassembling a packet, the method comprising the steps of:

- receiving a fragment packet having a fragment packet descriptor associated therewith (see Figs. 2-5, col 1 lines 36-53, col 6 lines 16-34, fragmented packets are received at the receiving device with header information and control information and having a fragment packet descriptor associated therewith see Fig. 5 and col 6 lines 16-34),

- placing the contents of the fragment packet descriptor in a packet descriptor in a reassembly table associated with the packet (see abstract, Figs. 2 & 8, col 8 lines 37-col 9 line 8, packet reassembly is performed based on the reassembly header information in Fig. 6 directing where in data memory 234 each fragment 312 in Fig. 3 will be stored. A reassembly ID 802 is used in conjunction with reassembly registers 810 in storing and properly reassembling the packets originating from one or more devices. Also see Figs. 4 & 5, col 6 lines 16-39, a fragment packet 440 as transmitted contains the packet header 420 information within which (detailed in Fig. 5) contains the virtual circuit ID contained in packet switch 140 of Fig. 2. The task is performed via the virtual circuit ID addresses a queue control block which in turn points to packet

Art Unit: 2616

descriptors, thus a fragment packet descriptor associated with a packet is located using virtual circuit ID pointers, furthermore, the contents 510 therefore of a specific packet descriptor are associated with a specific packet fragment 440 as transmission packet).); and

-in response to receiving all the fragments for the packet, issuing a request to a reassembly assist function (see Fig. 10, col 11 lines 34-40, col 13 lines 62-67 a request is issued for retransmission only if a fragment of a data packet is lost or corrupted, otherwise a request is issued or an ACK is sent to the reassembly module 214 of Fig. 2 as each fragment is received at the receiving source. A packet complete 1140 is issued when all fragments of a fragmented data packet are received.).

Further with respect to claim 29, Buchholz discloses a computer readable media (see Fig. 1B reference 110 the processor used to communicate with the switch 140 and network interface 120).

Regarding claims 2 and 8, Buchholz discloses a system with method and means for locating a fragment packet descriptor locating an entry in a reassembly table associated with the packet; and dereferencing a pointer held in the entry to locate the fragment packet descriptor (see Figs. 2, 5, and 8, col 8 line 37- col 9 line 25, a packet descriptor 510 identifies a particular packet within the packet control table 812 and as the queue for each packet fragment is used, the packet switch 140 of Fig. 2 removes the packet control block out of queue and processor 110 of Fig. 1 returns the empty queue back to the control blocks 814-818.).

Regarding claims 3, and 9, Buchholz discloses a system with method and means for receiving a request to reassemble the packet (see abstract, Figs. 2 & 8, col 8 lines 37- col 9 line 8, packet reassembly is performed based on the reassembly header information in Fig. 6 directing where in data memory 234 each fragment 312 in Fig. 3 will be stored. A reassembly ID 802 is used in conjunction with reassembly registers 810 in storing and properly reassembling the packets originating from one or more devices).

Regarding claims 4, and 12, Buchholz discloses a system with method for an index to an entry in a reassembly table that is associated with the first fragment of the packet; and a length value that is a count of the total number of entries in the reassembly table that are associated with the packet (see Figs. 3-5, col 5 line 54 – col 6 line 45, each packet fragment is sequenced and contains appropriate control information and packet length 520 within the packet header 420 which identifies the packet length being transmitted).

Regarding claims 5, and 10, Buchholz discloses a system with method and means for deallocating the fragment packet descriptor (see col 13 lines 39 – 60, a change in sequence number causes the central processor 110 to stop and reclaim resources allocated by the hardware).

Regarding claims 6, and 16, Buchholz discloses a computer readable medium that includes computer executable instructions for performing the method recited in claims 1 and 11 (see col 3 lines 11-29).

Regarding claims 13, 15, 18 and 20, Buchholz discloses a method and means for examining a bit map that indicates whether or not the fragments have been received or not (see Fig. 12, col 10 line 52 – col 11 line 6, the bitmap field 1212 consists of a status bit of the original fragment packet).

Regarding claims 14, and 19, Buchholz discloses a method and means for tracking a fragment of the packet (see col 12 lines 37-52).

Regarding claims 23, 25 and 27, Buchholz discloses determining if all fragments have been received (see col 10 line 53 – col 11 line 23).

Response to Arguments

Applicant's arguments filed 14 April 2006 have been fully considered but they are not persuasive.

With respect to Claim 1: Applicant contends “ Buchholz fails to disclose “placing the contents of the fragment packet descriptor in a packet descriptor associated with the packet”.

Examiner respectfully disagrees. Buchholz does disclose placing the contents of the fragment packet descriptor in a packet descriptor associated with the packet”. See Figs 4 and 5, col 6 lines 4-45, a fragment packet 440 as transmitted contains the packet header 420 information within which (detailed in Fig. 5) contains the virtual circuit ID contained in packet switch 140 of Fig. 2. The virtual circuit ID addresses a queue control block which in turn points to packet descriptors, thus a fragment packet descriptor associated with a packet is located using virtual circuit ID pointers. Placing of

Art Unit: 2616

the packet contents of the fragmented packets is part of the reassembly process when the data packets are too large to fit into a packet for transmission where the original packet information is separated into N fragments prior to transmission see col 4 lines 33-67 and Fig. 2.).

Applicant further contends, "The fragment packet descriptor is created by the transmitter and includes **the sequence number** associated with the fragment".

Examiner would like to direct attention to Figs. 4 –6; Fig. 4 illustrates a **transmission packet** and Fig. 5 being a detailed portion of the header of Fig. 4. FIG. 6 illustrates information contained within the reassembly header 430 of the transmission packet of FIG. 4. Of note, a reassembly header is only found on those transmission packets that carry a fragment comprising originating device message data. By design it includes a source logical unit identification (LUID) 610, packet identification (ID) field 620, sequence number field 630, see col 6 lines 63 – col 7 line 5.

Thus clearly Buchholz discloses placing packet descriptors associated with the packet and therefore claim 1 stands rejected.

Claims 2-10 are rejected based on their dependency to base claim 1 and also based on cited references as above.

Claims 11-27 have been rejected based on cited references as above and remain rejected.

Applicants newly added claim 30 has been examined on the merits and rejected under cited references accordingly.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj Jain whose telephone number is 571-272-3145. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Application/Control Number: 10/021,714
Art Unit: 2616

Page 13

RJ
April 20, 2006



CHI PHAM
SUPERVISORY PATENT EXAM
BIOLOGY CENTER

4/26/06